Transfers to hospital in planned home birth in four Nordic countries.
A prospective cohort study

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Background
Women planning a home birth will be transferred to hospital in case of complications or increased risk for adverse outcomes.

The aim of the present study was to describe the indications and frequency for transfer to hospital in planned home births.

Methods
Women in Norway, Sweden, Denmark and Iceland who had opted for, and were accepted for, home birth at the onset of labour, were included in the study. Data were collected prospectively during 2008-2013. Data from 3068 women, 572 nulliparas and 2 446 multiparas were analysed for proportions of transfers during labour and within 72 h after birth, indication, mode and duration for transfer and whether the transfer was classified as potentially urgent.

Results
Total transfers
A total of 402 women (13%) were transferred to hospital during labour or within 72 h of giving birth, including 33% of all nulliparous and 8% of all multiparous women.

The transfer rates differed across the countries:
- Norway 13%
- Sweden 9%
- Denmark 12%
- Iceland 25%

Transfers during labour
Most transfers occurred during labour, before the birth of the baby. A total of 271 women (9%) were transferred to hospital before birth.
- Nulliparous women 24%
- Multiparous women 5%

The most common indication for transfer was low progress of labour, both in nulli- and multiparous women.

Transfers after the birth
A total of 131 (4%) women and/or neonates were transferred to hospital within 72 h after the birth.
- Nulliparous women 9%
- Multiparous women 3%

The most common maternal indications for transfer were postpartum haemorrhage and tearing that needed to be repaired by an obstetrician. The most common neonatal indication was respiratory problems/low Apgar score.

Potentially urgent transfers
A total of 116 transfers were classified as potentially urgent (29% of all transfers and 4% of all deliveries). The most common indications for potentially urgent transfers were suspected fetal distress, postpartum haemorrhage and respiratory problems/low Apgar score. In 83 of the 116 potentially urgent transfers, no medical treatment was needed on arrival at the hospital.

Mode and duration of transfers
In transfers for nonurgent reasons, a private car was the most commonly used vehicle. In potentially urgent transfers, an ambulance car was used in most cases.

Median duration of transfers:
- For nonurgent reasons: 20 min (3-95)
- For potentially urgent reasons: 15 min (5-45)

Conclusion
Women planning a home birth should receive information about the possibility of transfer and about its potential mode and duration.

KEY MESSAGE
Transfers to hospital during labour or within 72 h after birth occurred in one-third of nulliparous women and 8.0% of multiparous women. Most transfers were nonurgent; the overall proportion of potentially urgent transfers was 3.8%.

FACTS ABOUT NORWAY, SWEDEN, DENMARK AND ICELAND
- 20.5 mill inhabitants
- 220 000 births annually
- Health registries
- Low rates of CS (16-22%)
- Midwives attend all births in all settings, and are independently professional responsible for low risk labour and birth.
- Welfare states
- Similar historic, cultural and socioeconomic backgrounds
- Some differences in midwifery education, centralisation of childbirth, population density across the region